

REPORT OF THE COUNCIL TO THE SEVENTY-EIGHTH ANNUAL
GENERAL MEETING OF THE SOCIETY.

The following table shows the progress and present state of
the Society :—

	Compounders	Annual Subscribers	Total Fellows	Associates	Patron	Grand Total
1896 December 31	253	391	644	40	1	685
Since elected	+ 3	+ 18	...	...	...	...
Deceased	— 14	— 10	...	— 2	...	...
Resigned ... ..	...	— 7	...	...	...	...
Removals	+ 2	— 2	...	...	...	...
Expelled ... ..	...	— 3	...	...	...	...
1897 December 31	244	387	631	38	1	670

Mr. Knobel's Account as Treasurer of the Royal

RECEIPTS.

Balances, 1897 January 1:—	£	s.	d.	£	s.	d.
At Bankers'	186	12	1			
In hand of Assistant Secretary on account of Turnor and Horrox Fund	14	13	1			
In hand of Assistant Secretary on Petty Cash Account	0	12	4			
				201	17	6
Dividends on £13,200 Consols, $2\frac{3}{4}$ per cent. ...	350	18	4			
1 quarter's dividend on £900 New $2\frac{1}{2}$ -per-cent. Stock	5	8	9			
3 quarters' dividends on £932 19 0 Metropolitan $2\frac{1}{2}$ -per-cent. Stock	16	18	3			
Dividends on £1,250 Metropolitan 3-per-cent Stock	36	5	0			
				409	10	4
Received on account of Subscriptions:—						
Arrears	153	6	0			
Annual Contributions for 1897	600	12	0			
" " 1898	6	6	0			
Admission Fees	46	4	0			
First Contributions	31	10	0			
				837	18	0
Composition Fees				105	0	0
Sales of Publications:—						
At Williams and Norgate's, 1896	34	5	7			
At Society's Rooms, 1897	60	13	9			
Sale of Photographs, 1897	16	12	0			
				111	11	4
Sale of £900 New $2\frac{1}{2}$ -per-cent. Stock				952	16	6
Income Tax refunded by Commissioners of Inland Revenue				14	1	8
Outstanding Cheques				6	12	0

£2,639 7 4

Feb. 1898. *Seventy-eighth Annual General Meeting.*

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Astronomical Society, from 1897 January 1 to December 31.

EXPENDITURE.

	£	s.	d.	£	s.	d.
Assistant Secretary : Salary	250	0	0			
" " for assistance in editing Society's Publications ...	50	0	0			
				300	0	0
House Duty	2	12	6			
Fire Insurance	7	16	6			
				10	9	0
Printing, &c., <i>Monthly Notices</i>	464	8	3			
" List of Fellows	7	7	0			
" Miscellaneous	23	1	0			
Lithography, Engraving, etc.	17	11	6			
				512	7	9
Reproduction of Photographs (Photographic Comm.)				18	13	8
Purchase of Photographs	3	12	0			
Turnor and Horrox Fund: Purchases for Library	27	3	11			
Binding Books in Library	15	14	9			
				46	10	8
Alterations and repairs to the Waters Telescope ...				18	2	1
Clerk's Wages	52	0	0			
Postage and Telegrams	74	12	9			
Carriage of Parcels	3	15	0			
Stationery and Office Expenses	3	16	7			
Ditto Spottiswoode & Co.	9	10	6			
				143	14	10
Expenses of Meetings	21	0	0			
Lantern Expenses	8	14	0			
				29	14	0
House Expenses	63	6	4			
Coals and Gas	51	12	10			
Electric Light Expenses	6	9	4			
Time Signal	6	10	0			
Sundry Fittings and Repairs	12	9	9			
Sundries	5	17	4			
				146	5	7
Haden & Son, new heating boiler, etc.				115	12	4
Illuminating address... ..	4	15	0			
A. Wyon, 5 Gold Medals	52	10	0			
				57	5	0
Jackson Gwilt Fund: 5 Bronze Medals, etc. ...	12	2	0			
" " Grant to Lewis Swift ...	25	0	0			
				37	2	0
Lee and Janson Fund Grant				5	0	0
Deductions on Cheques	0	1	11			
Cost of power of attorney	0	11	6			
Cost of American draft	0	1	0			
Cheque book	0	8	4			
				1	2	9
Purchase of £932 19 0 Metropolitan 2½-per-cent. Stock				952	16	6
Balances, 1897 December 31 :—						
At Bankers'	239	1	9			
In hand of Assistant Secretary on account of Turnor and Horrox Fund	5	9	2			
In hand of Assistant Secretary on Petty Cash Account	0	0	3			
				244	11	2
				£2,639	7	4

Report of the Auditors.

We have examined the Treasurer's accounts for the year 1897, and have found and certified the same to be correct. The cash in hand on December 31, 1897, including the balance at the bankers', &c., amounted to £244 11s. 2d.

The funded property of the Society is the same as at the end of last year, except that £900 $2\frac{1}{2}$ per cent. Consols have been sold, and £932 19s. Metropolitan $2\frac{1}{2}$ per cent. stock has been bought with the proceeds.

The books, instruments, and other effects in the possession of the Society have been examined, and they appear to be in a satisfactory condition.

We have laid on the table a list of the names of those Fellows who are in arrear for sums due at the last Annual General Meeting of the Society, with the amount due against each Fellow's name.

(Signed) RICHARD INWARDS,
F. W. LEVANDER,
A. C. D. CROMMELIN.

1898 February 2.

Trust Funds.

The Turnor Fund: A sum of £450 $2\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Horrox Memorial Fund: A sum of £100 $2\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Lee and Janson Fund: A sum of £323 16s. 6d. $2\frac{3}{4}$ -per-cent. Consols, the interest to be given by the Council to the widow or orphan of any deceased Fellow or Associate of the Society who may stand in need of it.

The Hannah Jackson (née Gwilt) Fund: A sum of £300 $2\frac{3}{4}$ -per-cent. Consols, the interest to be given in Medals or other awards, in accordance with the terms of the Trust.

Assets and Present Property of the Society, 1898 January 1.

	£	s.	d.	£	s.	d.
Balances, 1897 December 31:—						
At Bankers'	239	1	9			
In hand of Assistant Secretary on account of						
Turnor and Horrox Fund	5	9	2			
In hand of Assistant Secretary on Petty Cash						
Account	0	0	3			
	244	11	2			
Less outstanding cheques	6	12	0			
				237	19	2
Due on account of Subscriptions:—						
2 Contributions of 4 years' standing	16	16	0			
16 " 3 " 	100	16	0			
31 " 2 " 	130	4	0			
58 " 1 " 	121	16	0			
1 Admission Fee and First Contribution	3	3	0			
	372	15	0			
Less 3 Contributions for 1898 paid in advance	6	6	0			
				366	9	0
Due from Messrs. Williams and Norgate for sales of Publications during 1897				1	13	1
£13,200 2$\frac{3}{4}$-per-cent. Consols, including the Lee and Janson Fund, the Turnor and Horrox Fund, and the Jackson-Gwilt Fund.						
£1,250 Metropolitan 3-per-cent. Stock.						
£932 19 0 Metropolitan 2$\frac{1}{2}$-per-cent. Stock.						
Astronomical and other Manuscripts, Books, Prints, and Instruments.						
Furniture, &c.						
Stock of Publications of the Society.						
Four Gold Medals.						

Stock in hand of volumes of the *Memoirs*.—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I. Part 1	7	...	XXX.	149	1
I. Part 2	41	...	XXXI.	135	...
II. Part 1	50	3	XXXII.	146	...
II. Part 2	15	3	XXXIII.	155	...
III. Part 1	64	1	XXXIV.	158	1
III. Part 2	82	1	XXXV.	104	2
IV. Part 1	76	3	XXXVI.	187	8
IV. Part 2	89	3	XXXVII. Part 1	332	7
V.	100	3	XXXVII. Part 2	278	8
VI.	117	6	XXXVIII.	263	1
VII.	140	3	XXXIX. Part 1	228	3
VIII.	124	3	XXXIX. Part 2	233	3
IX.	131	3	XL.	248	1
X.	143	...	XLI.	395	1
XI.	150	...	XLII.	224	3
XII.	156	...	XLIII.	225	...
XIII.	154	...	XLIV.	206	1
XIV.	362	...	XLV.	238	...
XV.	135	...	XLVI.	217	1
XVI.	159	1	XLVII. Part 1	3	...
XVII.	142	1	XLVII. Part 2	18	...
XVIII.	136	1	XLVII. Part 3	2	...
XIX.	146	...	XLVII. Part 4	10	...
XX.	135	1	XLVII. Part 5	8	...
XXI. Part 1	310	...	XLVII. Part 6	9	...
XXI. Part 2	98	...	XLVII.	190	...
XXI. 1 & 2 (together)	57	...	XLVIII. Pt. 1	241	...
XXII.	159	1	XLVIII. Pt. 2	233	1
XXIII.	143	...	XLIX. Part 1	378	1
XXIV.	150	1	XLIX. Part 2	258	1
XXV.	160	...	L.	248	1
XXVI.	166	1	LI.	310	1
XXVII.	418	1	Index to <i>Memoirs</i> }	619	3
XXVIII.	376	...			
XXIX.	397	1			

Stock in hand of volumes of the *Monthly Notices*.—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I.	54	...	XXXI.	91	...
II.	58	...	XXXII.	108	5
III.	...	...	XXXIII.	90	...
IV.	...	...	XXXIV.	68	1
V.	...	...	XXXV.	52	...
VI.	42	...	XXXVI.	26	1
VII.	2	...	XXXVII.	33	3
VIII.	153	2	XXXVIII.	96	2
IX.	24	3	XXXIX.	93	...
X.	172	1	XL.	105	3
XI.	184	...	XLI.	105	5
XII.	106	2	XLII.	113	1
XIII.	177	2	XLIII.	111	2
XIV.	176	3	XLIV.	114	2
XV.	167	2	XLV.	115	1
XVI.	154	1	XLVI.	110	...
XVII.	167	1	XLVII.	127	2
XVIII.	242	...	XLVIII.	117	1
XIX.	52	...	XLIX.	112	8
XX.	31	...	L.	111	10
XXI.	16	...	LI.	114	8
XXII.	30	...	LII.	114	12
XXIII.	17	...	LIII.	115	15
XXIV.	22	...	LIV.	115	16
XXV.	13	...	LV.	129	3
XXVI.	9	1	LVI.	133	6
XXVII.	3	...	LVII.	136	8
XXVIII.	70	...	1st Index ...	548	3
XXIX.	50	...	2nd „ ...	845	...
XXX.	62	2			

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In addition to the above volumes of the *Monthly Notices*, the Society has a considerable stock of separate numbers of nearly all the volumes. With the exception, however, of Vols. XXXVI. to LVII., no complete volumes can be formed from the separate numbers in stock.

Instruments belonging to the Society.

A brief description of the chief instruments and other particulars relating to them will be found in *Monthly Notices*, vol. xxxvi. p. 126.

- No. 1. The *Harrison* clock.
- „ 2. The *Owen* portable circles, by Jones.
- „ 3. The *Beaufoy* circle.
- „ 4. The *Beaufoy* transit instrument.
- „ 5. The *Herschel* 7-foot telescope.
- „ 6. The *Greig* universal instrument, by Reichenbach and Ertel. The transit telescope, by Utzschneider and Fraunhofer, of Munich.
- „ 7. The *Smeaton* equatorial.
- „ 8. The *Cavendish* apparatus.
- „ 9. The 7-foot Gregorian telescope (late Mr. Shearman's).
- „ 10. The variation transit instrument (late Mr. Shearman's).
- „ 11. The universal quadrat, by Abraham Sharp.
- „ 12. The *Fuller* theodolite.
- „ 13. The standard scale, by Troughton and Simms.
- „ 14. The *Beaufoy* clock, No. 1.
- „ 15. The *Beaufoy* clock, No. 2.
- „ 16. The *Wollaston* telescope.
- „ 17. The *Lee* circle.
- „ 18. The *Sharpe* reflecting circle.
- „ 19. The *Brisbane* circle.
- „ 20. The *Baker* universal equatorial.
- „ 21. The *Reade* transit.
- „ 22. The *Matthew* equatorial, by Cooke.
- „ 23. The *Matthew* transit instrument.
- „ 24. The *South* transit instrument.
- „ 25. A sextant, by Bird (formerly belonging to Captain Cook).
- „ 26. A globe showing the precession of the equinoxes.
The *Sheepshanks* collection :—
- „ 27. (1) 30-inch transit instrument, by Simms, with level and two iron stands.
- „ 28. (2) 6-inch transit theodolite, with circles divided on silver; reading microscopes, both for altitude and azimuth; cross and siding levels; magnetic needle; plumb-line; portable clamping foot and tripod stand.

- No. 29. (3) Equatorial stand and clock movement for $4\frac{6}{10}$ -inch telescope (telescope lost); double-image micrometer; two wire micrometers; object-glass micrometer.
- „ 30. (4) $3\frac{1}{4}$ -inch achromatic telescope, with equatorial stand; double-image micrometer; one terrestrial and three astronomical eyepieces.
- „ 31. (5) $2\frac{3}{4}$ -inch achromatic telescope, with stand; one terrestrial and three astronomical eyepieces.
- „ 33. (7) 2-foot navy telescope.
- „ 34. (8) Transit instrument of 45 inches focal length, with iron stand and also Y's for fixing to stone piers; two axis levels.
- „ 35. (9) Repeating theodolite, by Ertel, with folding tripod stand.
- „ 36. (10) 8-inch pillar sextant, by Troughton, divided on platinum, with counterpoise stand and artificial horizon.
- „ 37. (11) Portable zenith telescope and stand, $2\frac{3}{4}$ -inch aperture and 26 inches focal length; 10-inch horizontal circle and 8-inch vertical circle, reading to $10''$ by two verniers to each circle.
- „ 38. (12) 18-inch Borda repeating circle, by Troughton, $2\frac{1}{8}$ -inch aperture and 24 inches focal length; the circles divided on silver, the horizontal circle being read by four verniers, and the vertical circle by three verniers, each to $10''$.
- „ 39. (13) 8-inch vertical repeating circle, with diagonal telescope, by Troughton and Simms; circle divided on silver, reading to $10''$; a 5-inch circle at eye-end, reading to single minutes; horizontal circle 9 inches diameter in brass to single minutes.
- „ 40. (14) A set of surveying instruments, consisting of a 12-inch theodolite for horizontal angles only, reading to $10''$; two sets of adjusting plates; tripod stand with enclosed telescope; heavy stand for theodolite; Y-piece of level; two large and three small ground-glass bubbles divided; level collimator, object-glass $1\frac{5}{8}$ -inch diameter and 16 inches focal length; micrometer eyepiece, comb, and wires; mercury bottle and trough.
- „ 41. (15) Level collimator, with object-glass $1\frac{7}{8}$ -inch diameter and 16 inches focal length; stand, rider-level, and fittings.
- „ 42. (16) 10-inch reflecting circle by Troughton, reading by three verniers to $20''$; counterpoise stand; artificial horizon, with mercury; two tripod stands.
- „ 43. (17) Hassler's reflecting circle, by Troughton, with counterpoise stand.
- „ 44. (18) 6-inch reflecting and repeating circle, by Troughton and Simms, contained in three boxes, two of which form stands. Circle divided on silver, reading to single

- minutes ; two inside arcs divided to single degrees, 150 degrees on each side ; artificial horizon and mercury.
- No. 45. (19) 5-inch reflecting and repeating circle, by Lenoir, of Paris.
- „ 46. (20) Reflecting circle, by Jecker, of Paris, 11 inches in diameter, with one vernier reading to 15''.
- „ 47. (21) Box sextant ; reflecting plane and level.
- „ 48. (22) Prismatic compass, by Troughton and Simms.
- „ 49. (23) Mountain barometer.
- „ 50. (24) Prismatic compass, by Thomas Jones, mounted with a cylindrical lens.
- „ 51. (25) Ordinary 4½-inch compass with needle.
- „ 52. (26) Dipping needle, by Robinson.
- „ 53. (27) Compass needle, mounted for variation.
- „ 54. (28) Magnetic intensity needle, by Meyerstein, of Göttingen ; a strongly fitted brass box with heavy magnet ; filar suspension.
- „ 55. (29) Box of magnetic apparatus.
- „ 56. (30) Hassler's reflecting circle, by Troughton ; a 10½-inch reflecting and repeating circle, with stand and counterpoise, divided on platinum with two movable and two fixed indices ; four verniers reading to 10''.
- „ 57. (31) Box sextant and glass plane artificial horizon, by Troughton and Simms.
- „ 58. (32) Plane 2¾-inch speculum, artificial horizon and stand.
- „ 59. (33) 2½-inch circular level horizon, by Dollond.
- „ 60. (34) Artificial horizon, roof, and trough ; the trough 8¼ by 4½ inches ; tripod stand.
- „ 61. (35) Set of drawing instruments, consisting of 6-inch circular protractor and common protractor, T-square ; one beam compass.
- „ 62. (36) A pantograph.
- „ 63. (37) A noddly.
- „ 64. (38) A small Galilean telescope with object-glass of rock crystal.
- „ 65. (39) Five levels.
- „ 66. (40) 18-inch celestial globe.
- „ 67. (41) Varley stand for telescope.
- „ 69. (43) Telescope, with object-glass of rock crystal.
- „ 71. Portable altazimuth tripod.
- „ 72. Four polarimeters.
- „ 74. Registering spectroscope, with one large prism.
- „ 76. Two five-prism direct-vision spectroscopes.
- „ 78. 9¼-inch silvered-glass reflector and stand, by Browning.
- „ 79. Spectroscope.
- „ 80. A small box, containing three square-headed Nicol's prisms ; two Babinet's compensators ; two double-image prisms ; three Savarts ; one positive eyepiece, with Nicol's prism ; one dark wedge.

- No. 81. A back-staff, or Davis' quadrant.
 „ 82. A nocturnal or star dial.
 „ 83. An early non-achromatic telescope, of about 3 feet focal length, in oak tube, by Samuel Scatliffe, London.
 „ 84. A Hollis observing chair.
 „ 85. Double-image micrometer, by Troughton and Simms.
 „ 86. $4\frac{1}{2}$ -inch Gregorian reflecting telescope, by Short, with altazimuth stand and 6-inch altitude and azimuth circles and two eyepieces.
 „ 87. $3\frac{1}{4}$ -inch Gregorian reflecting telescope with wooden tripod stand.
 „ 88. Pendulum, with 5-foot brass suspension rod, working on knife-edges, by Thomas Jones.
 „ 89. A Rhabdological Abacus. A contrivance invented by Mr. H. Goodwyn, consisting of a box filled with compartments, in which are square rods covered with numbers, which can be arranged so as to facilitate the labour of multiplying high numbers.
 „ 90. An Arabic celestial globe of bronze, $5\frac{3}{4}$ inches in diameter.
 „ 91. Astronomical time watch-case, by Professor Chevalier.
 „ 92. 2-foot protractor, with two movable arms, and vernier.
 „ 93. Beam compass, in box.
 „ 94. 2-foot navigation scale.
 „ 95. Stand for testing measures of length.
 „ 96. Artificial planet and star, for testing the measurement of a fixed distance at different position-angles.
 „ 97. 12-cell Leclanché battery.
 „ 98. 2-foot 6-inch navy telescope, with object-glass $2\frac{1}{2}$ inches, by Cooke, with portable wooden tripod stand.
 „ 99. 12-inch transit instrument, by Fayrer and Son, with level and portable stand.
 „ 100. 9-inch transit instrument, with level and iron stand.
 „ 101. Small equatorial sight instrument, by G. Adams, London.
 „ 102. Sun-dial, by Troughton.
 „ 103. Sun-dial, by Casella.
 „ 104. Sun-dial.
 „ 105. Box sextant, by Troughton and Simms.
 „ 106. Prismatic compass, by Schmalcalder, London.
 „ 107. Compass, by C. Earle, Melbourne.
 „ 108. Prismatic compass, by Negretti and Zambra.
 „ 109. Dipleidoscope, by E. Dent.
 „ 110. Abney level, by Elliott.
 „ 111. Pocket spectroscope, by Browning.
 „ 112. Universal sun-dial.
 „ 113. Double sextant, by Jones.
 „ 114. Two models, illustrating the effects of circular motions.
 „ 115. A cometarium.
 „ 117. } Two old sun-dials.
 „ 118. }

- No. 119. Specimens of diffraction gratings, by Prof. W. A. Rogers.
- „ 120. A 6-prism spectroscope, by Browning.
- „ 121. Spitta's improved maximum and minimum thermometer.
- „ 122. A 6-inch speculum, with flat; the speculum said to be by Sir W. Herschel, and re-figured by Sir J. Herschel.
- „ 123. A 6-inch refracting telescope, by Grubb, with 3 eyepieces.
- „ 124. Position micrometer, by Cooke.
- „ 125. A 6-inch refracting telescope, by Simms, with eyepieces and solar diagonal.
- „ 126. $3\frac{1}{2}$ -inch portable refracting telescope, by Tulley, with tripod stand.
- „ 127. Globe representing the visible surface of the Moon, by John Russell, R.A. (1797).
- „ 128. Bichromate battery and Ruhmkorff coil.
- „ 129. Slater's improved armillary sphere.
- „ 130. 10-inch brass pillar sextant with counterpoise stand, by Troughton.
- „ 131. Double box sextant, by Cary.
- „ 132. Equatorially mounted camera with $2\frac{1}{2}$ -inch portrait lens and telephotographic enlarging lens by Dallmeyer; iron pillar. [Presented by the executors of the late Sidney Waters.]
- „ 133. $3\frac{1}{4}$ -inch equatorial by Ross, with tall tripod stand, equatorial mounting, eyepieces, and micrometer. [Presented by Mrs. Mann.]

Besides the above, there is the following apparatus available for eclipse work :—

- 4 Slits for spectroscope.
- 2 Abney lenses used in photographing the corona.
- 2 Dallmeyer negative enlarging lenses.
- 1 Cœlostæt with 16-inch plane mirror.

The following instruments are lent, during the pleasure of the Council, to the undermentioned persons :—

- No. 4. The *Beaufoy* transit instrument, to the Observatory, Kingston, Canada.
- „ 16. The *Wollaston* telescope, to Mr. R. Inwards.
- „ 22. The *Matthew* equatorial, to Mr. J. Brett.
- „ 23. The *Matthew* transit, to Captain W. Noble.
- „ 27. (1) 30-inch transit and stand, to Mr. B. T. Moore.
- „ 28. (2) 6-inch theodolite and stand, to Dr. A. A. Common.
- „ 29. (3) Equatorial mounting, clock, &c., to the Rev. C. D. P. Davies.
- „ „ Wire micrometer (No. 2), to the Rev. C. D. P. Davies.

- No. 31. (5) $2\frac{3}{4}$ -inch telescope and stand, to Mr. F. J. Wardale.
 „ 42. (16) Artificial horizon, roof, and mercury bottle, to Mr. F. Robbins.
 „ 47. (21) Box sextant and horizon, to Mr. C. H. Johns.
 „ 50. (24) Prismatic compass, to Mr. Maxwell Hall.
 „ 57. (31) Box sextant, to Dr. A. A. Common.
 „ 69. (43) Telescope with rock-crystal object glass, to Sir W. Huggins.
 „ 72. (c) Polarimeter, to Professor C. Michie Smith.
 „ 76. (b) 5-prism direct-vision hand spectroscope, to Mr. E. W. Ellerbeck.
 „ 85. Double-image micrometer, to Mr. B. T. Moore.
 „ 119. Diffraction gratings, to Mr. B. T. Moore.
 „ 123. 6-inch telescope, by Grubb (object-glass only) to Mr. W. E. Wilson.
 „ 124. Position micrometer, by Cooke, to Mr. T. K. Mellor.
 „ 125. 6-inch refractor by Simms, to Dr. A. A. Common.
 „ 126. $3\frac{1}{2}$ -inch portable refractor, by Tulley, to Mr. H. Sadler.
 „ 128. Bichromate battery, to the Rev. W. J. B. Roome.
 „ 131. Double sextant, by Cary, to Mr. F. Robbins.

The Gold Medal.

The Council have awarded the Society's Gold Medal to Mr. W. F. Denning, for his meteoric observations, his cometary discoveries, and other astronomical work. The President will lay before the Society the grounds upon which the award has been founded.

The Library.

A supplementary catalogue, containing the additions to the library from 1884 June to 1897 June, is in preparation and will shortly be published.